Docket No.: 256241US0PCT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF:
Naoto OHTA, et al.
SERIAL NO: 10/501,333

GROUP: 4191
CONFIRMATION NO. **9835**
EXAMINER: Best, Z.

FILED: July 23, 2004

FOR: ANODE MATERIAL FOR LITHIUM ION SECONDARY BATTERY

DECLARATION UNDER 37 C.F.R. § 1.132

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

Sir:

Now comes Naoto OHTA who deposes and states that:

1. I am a graduate of Toyohashi University of Technology and received my Master's degree in the year 1989.

2. I have been employed by Toyo Tanso Co. LTD for 13 years and currently serve as a Chief in the field of fundamental carbon-technology.

3. The following experiments were carried out by me or under my direct supervision and control.

4. Coated graphite powders of the present invention are made by dry-blending, where, *e.g.*, 100 parts by weight of natural graphite powder having an average interlayer spacing d(002) of 0.3354 (defined by the Gakushin-method) was dry-blended with polyvinyl alcohol powder. The mixed powders were then heat treated. Table 1 shows the average interlayer spacing d(002) of graphite powder coated with the polyvinyl alcohol as a function of the amount of polyvinyl alcohol added:

Table 1: Average interlayer spacing d(002) of anode material before and after resin coating.

Added amount of PVA (parts by weight with respect to 100 parts by weight of natural graphite)	d(002) (nm)
0 (no coating)	0.3554
10	0.3354
50	0.3355
100	0.3354

*Although 50 parts by weight of PVA is adopted in the examples of the present application, it is understood that d(002) does not change even in the case of 100 parts by weight.

As shown in Table 1, the d(002) of the graphite powder before coating is substantially identical with d(002) after coating.

5. Graphite powder was also prepared by the process of Example 1 disclosed in U.S. Patent 6,596,437. The average interlayer spacing d(002) of the graphite powder without a resin coating was determined by X-ray diffraction: d(002) = 3.35 Å. The average interlayer spacing d(002) was then determined for the graphite powder coated with a resin: d(002) = 3.41 Å. Thus, a substantial increase in the interlayer spacing of the graphite powder prepared by the process of Example 1 in U.S. Patent 6,596,437 is observed.

6. The results show that the average interlayer spacing of the graphite powder made by dry-blending does not change when resin is applied to the graphite powder, while graphite powder made by the process of Example 1 in U.S. Patent 6,596,437 exhibits an increased average interlayer spacing. Thus, the mesopores of the graphite powder prepared by dry-blending are coated with resin, while any fine pores of the graphite powder prepared by the process of Example 1 in U.S. Patent 6,596,437 are not coated with resin. The coating exhibited in U.S. Patent 6,596,437 is limited to the exterior portion of the graphite powder. Accordingly, the process of Example 1 in U.S. Patent 6,596,437 does not inherently result in coating the mesopores of the graphite powder.

7. The undersigned petitioner declares further that all statements made herein of his own knowledge are true and that all statements made on information and belief are believed to

be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of this application or any patent issuing thereon.

8. Further deponent saith not.

Signature

April 15 2009
Date

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